

Amendments to the Specification:

Please replace paragraph [0001] with the following amended paragraph:

[0001] The subject matter of the present application is related to that of the following applications each of which is being filed on the same day as the present application: 10/751,344 ~~10/~~_____, entitled "Articulating Arm for Medical Procedures" (~~Attorney Docket No. 02356-000600US~~); 10/750,369 ~~10/~~_____, entitled "Disposable Transducer Seal" (~~Attorney Docket No. 02356-000700US~~); 10/751,343 ~~10/~~_____, entitled "Acoustic Gel with Dopant" (~~Attorney Docket No. 02356-000800US~~); 60/533,528 ~~60/~~_____, entitled "Position Tracking Device" (~~Attorney Docket No. 021356-000900US~~); 60/533,988 ~~60/~~_____, entitled "Method for Planning and Performing Ultrasound Therapy" (~~Attorney Docket No. 021356-001000US~~); 60/534,036 ~~60/~~_____, entitled "Ultrasound Therapy Head with ~~Head~~ Movement Control" (~~Attorney Docket No. 021356-001100US~~); 60/533,958 ~~60/~~_____, entitled "Systems and Methods for the Destruction of Adipose Tissue" (~~Attorney Docket No. 021356-001200US~~); 60/534,034 ~~60/~~_____, entitled "Component Ultrasound Transducer" (~~Attorney Docket No. 021356-001300US~~); the full disclosure of each of these applications are incorporated herein by reference.

Please replace paragraph [0038] with the following amended paragraph:

[0001] Referring now to the drawings, there is a vacuum chamber 706 for degassing the coupling fluid and the chamber may be of a variety of known designs. Since the apparatus 7 is a component of a larger system, preservation of the available space is preferred. Thus the vacuum chamber 706 is preferably small with a number of baffles contained within the vacuum chamber 706 to maximize the surface area the coupling fluid is exposed to. By using thin diameter tubes ~~713~~, panels or coils as baffles 713, the coupling fluid may be flushed through the vacuum chamber volume 724 and exposed to the gas permeable membrane 730 with a favorable volume to area ratio. Furthermore this ratio can double as a cooling baffle for the coupling fluid. As the coupling fluid moves through the vacuum chamber 706, the pressure gradient inside the chamber draws dissolved gasses out of solution and those gases diffuse across the membrane into the

lower pressure volumes of the vacuum chamber volume 724. A vacuum source, such as a vacuum pump 704, is used to maintain the negative pressure either continuously or based on a duty cycle tied to a timer (not shown), or a sensor 714 for detecting the presence of dissolved gases. Alternatively, in hospitals and other locations where vacuum systems are provided, these systems can be connected to the vacuum chamber to provide the desired negative pressure. The flow rate of the coupling fluid through the vacuum chamber 706 is regulated to ensure sufficient exposure of the coupling fluid to the gas permeable membrane 730 and pressure gradient 724. The flow rate can also be controlled in order to increase the residence time in the baffles 713 if increased heat exchange is desired. If the flow rate and dissolved gas levels are sufficient so that a reduced volume of the coupling fluid can be degassed to maintain the desired levels, some portion of the coupling fluid may be redirected through a control valve ~~724~~ 728 into a bypass tube 718. The coupling fluid that is directed into the bypass tube 718 will not be degassed.

Please replace paragraph [0047] with the following amended paragraph:

[0002] The efficiency of the vacuum chamber 706 depends on several factors including the residence time of the coupling fluid in the vacuum chamber and the ability of the dissolved gases to come out of solution. It is desirable then to increase the exposure of the coupling fluid to the pressure gradient of the vacuum chamber. The coupling fluid can pass through the vacuum chamber 706 through a single gas permeable membrane conduit 730 (Fig. 2) and exposing the fluid near the membrane of the conduit to the pressure gradient in the vacuum chamber volume space 724. The flow direction is indicated by the arrows indicating the fluid is still inline with the fluid circuit 712. Gas removed from solution is vented through a conduit 726 toward the vacuum pump 704. Alternatively the fluid may pass through a series of low diameter gas permeable tubes (Fig. 3) or through one or more tortuous tubes, such as a coil, to increase residence time in the chamber (Fig. 2A). Alternatively the fluid may be pumped through a series of baffles (Fig 3A). The embodiments described and shown are merely illustrative and not meant to be limiting in any sense.

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Fig. 1 replaces the original sheet including Fig. 1.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes